An Investigation Into How Sources of Information Influence Consumers' Perceptions and Decision Making

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ABSTRACT

Consumers rely on sources of information to learn about products and make informed purchasing decisions. In fact, one of the first factors consumer consider when evaluating product information, is the source of that information. Yet despite the importance of the source, research on this topic is sporadic leaving my unanswered questions. This dissertation advances our understanding of how three different sources of information influence consumers' perceptions and decision making. In the first study, we examine two sources (consumer originated and third party) to determine which one dominates in a persuasion episode. We find consumers overwhelmingly prefer consumer originated versus third party sources because they believe fellow consumers convey information that is diagnostic of future product experiences. In our second study, we show how a subtle firm-dominated characteristic, firm size, influences manufacturing assumptions and purchase behavior. We find consumers prefer small to large firms for unique products, because they assume small firms have a high degree of human intervention in the manufacturing process.

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GENERAL ABSTRACT

When consumers need to learn about a product, they will have to consult a source of product information. And there are several distinct sources available to consumers including firms, friends, family, and experts. This research advances our understanding of how different sources impact consumers. In our first study, we investigate a simple but overlooked question: do consumers prefer the opinions of fellow consumers or experts? We find consumers strongly prefer consumer opinions over experts because they believe consumers convey information that is diagnostic of future product experiences. In our second study, we examine how a firm characteristic, firm size, influences consumers. We find consumers prefer small firms for unique products because they assume small firms have a higher degree of human intervention in the manufacturing process.

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CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

It is well understood that consumers will spend time evaluating a product before purchasing it. To do so, they will have to consult a source of product information. Research has shown that consumers may consult one source (Beatty and Smith 1987; Olshavsky and Granbois 1979) or several (West and Broniarczyk 1998). It is theorized consumers consult sources of information to reduce uncertainty in the choice process and to assist in making predictions about a future consumption event (Boulding et. al.,1993; De Lange et. al., 2016; Gershoff et. al., 2001; Simonson 2016). While there are many individual sources, Woodruff (1972) suggested they all originate from one of three categories: (1) consumer originated (2) third parties and (3) firm-dominated.

There is extant research that has demonstrated that the source of information is an important factor that impacts consumers' judgement and decision making. This dissertation adds to this body of research across all three source categories. In the first study, we examine the interplay between consumer originated and third party sources. In the second study, we examine how a subtle firm-dominated characteristic impacts consumers' manufacturing perceptions and purchase behavior. The following section provides a brief overview of the three main sources of information.

CONSUMER ORIGINATED SOURCES

Drawing from prior research, I define a consumer originated source as any source of information that represents a regular consumer who is unaffiliated with a firm or independent

third party. This can include friends, acquaintances, family or any consumer that has used the product (Woodruff 1972). The three most popular research streams that serve as proxies for consumer originated source research include: source similarity (Berscheid 1966; Busch and Wilson 1976; Jiang et. al., 2010; Faraji-Rad et. al., 2015; Shang and Crosen 2009; Woodside and Davenport 1974), word-of-mouth (Godes and Mayzlin 2004; Money, Gilly and Graham 1998; Trusov et. al., 2009) and user reviews (Chevalier and Mayzlin 2006; Luca 2016; Simonson 2016; Ye, Law and Gu 2009; Zhu, and Zhang 2010).

The number of topics studied within these research streams is expansive and diverse. There are, however, a few common themes that have emerged from them. Perhaps the most notable, is that consumer originated sources are considered by many to be the most influential source of product information (Lisjak et. al., 2021; Misner 1999; Simonson 2016; Trusov et. al. 2009). There are several theories that aim to explain this phenomenon. First, consumer sources are perceived to be unbiased compared to other sources of information (Lisjak et. al., 2021; Nielsen 2015). Second, research has shown that using consumer sources can fulfil a need of connectedness (Jiang et. al., 2010). Third, consumer content is perceived to be more relevant and correlated to their own opinions, which could make the advice more diagnostic (Bickart 2001; Hovland 1953). Note that Hovland theorized consumer content may more diagnostic than other sources, but to the best of my knowledge, this claim was never empirically tested.

THIRD PARTY SOURCES

Third party sources can be defined as a source of information that comes from an independent entity that is unaffiliated with the firm and does not represent a regular consumer

(Woodruff 1972). Popular third party sources include Consumer Reports, Kelly's Blue Book, and Edmunds (Basuroy et. al., 2006; Shaffer and Zettelmeyer 2002). The term, 'experts' is also considered to be synonymous with third parties and as a result, expert reviews would be included in this category (De Lange et. al., 2016). Third party sources are frequently consulted by consumers and firms make concerted efforts to solicit their evaluations (Nguyen et. al., 2021). Further, the advent of the internet has proliferated the amount and availability of third parties, many of which are free of cost (Shaffer and Zettelmeyer 2002). While the third party research is not as robust as consumer originated (Liu and Park 2015; Zhang et. al., 2016), several important themes have emerged.

Third party sources have shown to be a trusted and widely used source of information (Curry and Faulds 1986; Golder, Mitra and Moorman 2012). One reason for this is because third parties are perceived to be more impartial and objective than other sources (Gerstner 1985; Lichtenstein and Burton 1989; Mitra and Golder 2006; Vermeulen and Seegers 2009). For instance, Consumer Reports describes themselves as: *an independent nonprofit member organization that works side-by-side with consumers for truth, transparency and fairness in the marketplace. CR was created to equip people with credible, trustworthy information need to make informed choices.* Consumers have also been shown to consult third parties when their product involvement is low (Noble et. al., 1987). One theory to explain this, is because third parties are considered to have greater expertise and more specialized knowledge than regular consumers (Bettman and Sujan 1987; Holbrook 1999; Solomon 1986). In fact, De Lange (2016) also suggested third party reviews are superior to user reviews in assessing objective product quality.

FIRM-DOMINATED SOURCES

Perhaps the most well recognized source of product information come from firm-dominated sources. A firm-dominates source of information is simply defined as information that is conveyed by the firm. Popular examples include advertising, sales and public relations (Brown and Dacin 1997; Woodruff 1972). In addition to these tactics, firms have been shown to influence consumers in more subtle ways. These subtle factors may not be explicitly communicated and can include factors such as the firm's size, organizational type and brand. There is extant research that has demonstrated how traditional and subtle firm factors influence consumers' judgement and decision making.

Traditional sources such as advertising and sales are longstanding channels that consumers often first turn to, to reduce search costs and gain useful product information (Cheong et al., 2021; Nelson 1970 and 1974; Stigler 1961). In fact, for many years, nearly all sources of product information were exclusively controlled by the firm (Erdem, Keane and Sun 2008; Rao and Monroe 1989). Even though recent research has shown traditional effects (eg, advertising) are beginning to wane (Sethuraman et. al., 2011), they still exert a strong influence on consumers' perceptions and purchase behavior (Baker et. al., 1992; Hean et. la., 2021; Kaltcheva and Weitz 2006). This may explain why firms increased their advertising spend over the past decade (Huanhuan et. al., 2021). One notable distinction of a traditional source compared to others, is that a traditional source can be perceived as biased and as a result, evoke persuasion knowledge (Friedstad and Wright 1994).

Subtle firm factors have also shown in influence consumers and have garnered more attention in recent years. Popular factors include the firm's brand, size, organizational type or corporate social responsibility status (Newman and Brucks 2018; Rust et. al., 2021; Webster 1968; Yang and Aggarwal 2019). For instance, the size of a firm has shown to influence product expectations and purchasing decisions (Chandy and Tellis 2000; Paharia, Avery and Keinan 2014; Yang and Aggarwal 2019). Mere brand exposure has been linked to numerous effects such as eliciting behavioral tendencies consistent with the brand image (Fitzsimons et. al., 2008) and influencing quality and price perceptions (Dodds et. al., 1991). Lastly, corporate social responsibility has been shown to create a 'warm glow' with consumers as well as influence price perceptions (Habel, Johannes, et. al., 2016).

In sum, there is a variety of sources consumers can consult to learn more about product information. Further, we understand each source can influence consumers in unique ways. The following chapters introduce studies that add to this field of research. In Chapter 2, I explore which source of information (consumer originated and third party) dominates and why. In Chapter 3, I investigate how a subtle firm-dominated characteristic impacts consumers' manufacturing perceptions and purchase behavior.

CHAPTER 2: THE PREFERENCE FOR SOURCE SIMILARITY IN SETTINGS WITH OPPOSING OPINIONS FROM DIFFERENT MESSAGE SOURCES

Consumers typically consult multiple sources before purchasing a product and they are more likely than ever to encounter a mixture of opinions from those sources (He and Bond 2016; Sunder, Kihyun and Yorkston 2019; West and Broniarczyk 1998). For instance, imagine a consumer who has narrowed their product search to two options and decides to consult product ratings to assist in their selection. For each product option, however, the consumer finds that user and expert ratings disagree. When faced with this situation, which option would the consumer prefer? Despite the extant research in product reviews, persuasion and related fields, it appears research overlooked this question. This work addresses this gap in the literature and examines how consumers respond to opposing opinions from different message sources.

Persuasion researchers recognized early on that message source is an important factor in the effectiveness of a communication (Hovland, Janis and Kelly 1953). However, it appears that the majority of this research investigated message sources independent of one another (Wilson and Sherrell 1993). Our investigation evaluates multiple message sources together because we believe this reflects current purchasing scenarios. Further, we chose to investigate this using online product ratings for two reasons. First, there are two popular and distinct online rating message sources: users and experts. Second, product ratings have experienced rapid growth and play an integral role in the consumer decision process (Sunder, Kihyun and Yorkston 2019).

We contribute to the product review research and especially research that is focused on review helpfulness. Most of that research focuses on ratings with explicit helpfulness votes and examines what predicts those votes (Cao et al., 2011). However, because expert ratings typically

are not associated with review helpfulness votes, no research to date has examined the helpfulness of expert ratings or compared their helpfulness to that of user ratings. One piece of research, focused on movies, approached the issue of relative ratings helpfulness from a different perspective, comparing the criteria that consumers and critics use in their assessment, and found that regular moviegoers are more likely to consult the evaluations of other moviegoers than that of experts (Holbrook 1999). In the present research, we show that the preference to follow the advice of peers is much more general and applies to a multitude of products.

We also contribute to persuasion research in two ways. First, we reveal which message source consumers prefer, when deciding between following the advice of users or experts. Second, we evaluate the mechanism of action behind this behavior. Prior research shows that the persuasiveness of advice depends primarily on the adviser's characteristics (Faraji-Rad, Samuelsen, and Warlop 2015). Research has also shown that both expert sources (Sternthal et al., 1978; Wilson and Sherrell 1993) and similar sources (Berscheid 1966; Busch and Wilson 1976; Faraji-Rad et al., 2015; Jiang et al., 2010; Francesca et al., 2009; Woodside and Davenport 1974) exert a strong persuasive influence. However, prior research has not examined which message source consumer prefer more and why. With the popularity of product ratings, the fact that different types of product ratings can coexist, and considering that consumers often seek multiple opinions (West and Broniarczyk 1998), this becomes a relevant question. While we do not want to imply that user opinions always trumps experts', we do find a fundamental preference for ratings generated from similar others.

THEORETICAL BACKGROUND

Having many choices is considered to be one of the paramount achievements of developed market economies (Diehl and Poynor 2010). Consumers may be attracted to a large variety of options, but an overabundance can also lead to adverse consequences. For instance, too many options can make it difficult for consumers to process all the information and make an informed decision (Scheibehenne, Greifeneder and Todd 2010). As a result, consumers must rely on sources of helpful product information so they can quickly narrow their search and make an informed product purchase. Information that is thought to be more valuable should exert a stronger influence on consumer purchase behavior. Moreover, judgements of the value of information affect the perceived benefits of an information source and the likelihood that an information source will be used (Weiss, Lurie, and Macinnis 2008). One source of information that consumers deem as valuable and high quality are product ratings (Sunder, Kihyun and Yorkston 2019).

Consumers find many product ratings online. However, they do not consider them all to be equally helpful. For user ratings, readers can sometimes vote on whether they consider a particular review helpful. The responses are then aggregated and published as a percentage, which divides the total number of positive helpfulness votes by the total number of votes referred to as review helpfulness (Liu et. al., 2008). A large body of research has explored which characteristics of a review affect the perceived helpfulness. For instance, the length of the review, lexical features, reviewer ratings and review depth have been shown to impact perceived helpfulness (Kim et. al., 2006, Mudambi and Schuff 2010). Forman et. al. (2008) further found

that readability had a positive relationship, while spelling errors have a negative impact on helpfulness. Lastly, reviews with extreme opinions tend to be more helpful and receive more helpfulness votes than those with mixed or neutral opinions (Cao et. al., 2011; Ludwig et. al., 2013). Despite this in-depth exploration of the drivers of review helpfulness, it appears that the message source has been overlooked. In addition, this research has largely focused on user ratings and ignored experts.

While product review research may have ignored message sources, other fields of research including persuasion have explored the topic. Prior research has shown both source similarity and expertise can have a strong influence on consumers and a significant power to persuade (Mackie, Worth and Asuncion 1990; Wilson and Sherrell 1993). Karmarkar and Tormala's (2010) define source similarity as how similar participants believed the message source was to themselves and how much participants felt they had in common with the message source. Consumers may prefer similar others because their preferences are correlated with one's own (Hovland et. al., 1953) or because it helps them maintain a sense of connectedness (Jiang et al. 2010). Consumers also value experts because of their depth and breadth of understanding in a product category (Bettman et. al., 1980; Mitchell & Dacin, 1996; Sela et. al., 2019).

We assert that, as regular users are more similar to consumers than experts, consumers are likely to believe that information conveyed in user ratings is more valuable and diagnostic for their own experience with a product then those of experts. In other words, we theorize consumers will place a premium on experiential information and generally prioritize it over other sources of information. In support of this assertion, research has shown that experiential information can be difficult to obtain and that consumers will make concerted efforts to obtain it (Bone 1995; Clarkson et. al., 2013; Hoch and Ha 1986). Experiential information is important to consumers

because it can increase long-term happiness with consumption choices (Gibbs 1997) and because it is less susceptible of misinformation (Cowley and Janus 2004). Critical to our hypothesis is the assumption that consumers perceive experiences from regular users to be more similar and diagnostic than those of experts. There are several reasons why consumers may entertain this assumption.

First, users and experts emphasize different criteria in their product evaluations. Experts' evaluations are fairly cerebral as they analyze the technical features of a product. In fact, a primary marker of expertise is *breadth knowledge*, defined as the ability to discern and judge quality in more breadth and depth than a novice (Alba and Hutchinson 1987). Furthermore, experts can sometimes be provided a list of product criteria to evaluate in advance (Wilson and Schooler 1991). By contrast, consumers may have little knowledge about the full array of dimension to evaluate a product (Clarkson et. al., 2013).

For instance, Holbrook (1999) compared the criteria that consumer and critics use when evaluating movies, and how that shapes their movie preference. Holbrook found that consumers tend to gravitate towards movies that are more relatable or familiar, cater to conventional values or support a blockbuster mentality. In contrast, expert judgements tend to favor films with abstract qualities, a deviation from conventional norms and an emphasis on subtle complexities. Regular movie-goers' evaluation with a movie typically centers on the entertainment it provides. As a result, ratings of regular movie-goers are more likely to reflect the experience of consuming the movie, and other prospective movie-goers are likely to be especially interested in this type of experiential information. We believe, though, that this preference for experiential information is not confined to products with entertainment value (i.e., movies and books), but to products in general.

Just as for movies, experts and regular consumers engage differently with products, too. Users engage with products through their personal use, while experts tend to engage with products for testing or evaluative purposes. However, the expert never actually owns the product. One popular expert source of product information, Consumer Reports, actually emphasizes that their products are tested in laboratories across the globe and makes no mention of testing of products in homes for personal use. While we do not claim that consumers do not care about technical aspects of products and testing results, we do propose that they will place a premium on knowing what their experience would be of using the product in their personal life.

Finally, while we propose that consumers care more about user ratings, consumers may prioritize ratings from experts over users when objective product information is more important to consumers than subjective information. We propose that this occurs because experts are more able and more likely to base themselves on objective product information, which makes their recommendation more diagnostic than that of users. In fact, prior research has shown that expert reviewers are seen as a source of more objective information than users (De Langhe et. al., 2016; Henning-Thurau et al. 2000). So, we assert that the diagnosticity of a message source will depend on what type of product information consumers care about. At a general level, and without emphasizing specific product attributes, most consumers will perceive users to be more diagnostic than experts. When product attributes are emphasized, however, consumers may prefer users or experts, depending on which attributes are emphasized.

OVERVIEW OF STUDIES

In Study 1, we reveal consumers' preference for user to expert ratings across a diverse set of 10 product categories and 20 products. In Study 2, we demonstrate the critical role of assumed source similarity. We find that users think they are more similar to other users than to experts, which makes them prefer user ratings. If consumers think they are more similar to experts, however, they favor expert ratings. We also establish process evidence of mediation and demonstrate that consumers' preference for a rating type is driven by the perception that it is diagnostic of product performance. Study 3 demonstrates that diagnosticity not only depends on source similarity, but also on the total number of raters. Therefore, even if consumers think they are similar to users, they are less likely to favor a user rating (over an expert rating), when the rating reflects the experience of a single user. Lastly, in Study 4, we show that source similarity no longer exerts an effect on rating type preference, when diagnosticity is tied to specific attributes.

STUDY 1: TESTING THE PREFERENCE FOR USER VERSUS EXPERT REVIEWS

In Study 1, we test consumers' preference for user versus expert ratings in a product purchase scenario that reflects a dilemma which consumers may encounter when consulting such ratings. Specifically, a consumer may have to decide between a product that is rated higher by users or one that is rated higher by experts. For exploratory purposes, we also distinguish between hedonic and utilitarian products. We predict that consumers prefer products rated higher

by users over products rated higher by experts. This preference may be more pronounced for hedonic products, since the impact of experiential information may be more important for them.

Method & Results (pretest)

We selected 10 product categories and two products per category. One is intended to be hedonic and one utilitarian. We then conducted research to determine if the selected products represented hedonic and utilitarian products, as intended. We recruited 211 adults ($M_{age} = 36$, 52% female) from (MTurk). Each participant was randomly given 10 products from 10 different product categories, making sure that each participant received five products intended as hedonic and five intended to be utilitarian. For each product, participants were provided with a product description and then asked to select five adjective pairs out of 10 (5 HED and 5 UT) total options from the HED/UT product dimension scale (Voss et al. 2003). We calculated the HED and UT score for each participant as a percentage of HED and UT choices on the scale, and averaged these across participants, for each product. Of the 20 products we initially selected, all of them scored as intended: Hedonic products were viewed as more hedonic than utilitarian, and vice versa. Of the 20 scores, 14 were significantly different from 50%; the scores of six other products were not but all but one were in the intended direction.

Method - main study

We recruited 214 adults ($M_{age} = 34.9$, 52.3% female) from MTurk to participate in a between-subjects study design. We created two product lists that both contained five hedonic and

five utilitarian products, spanning the 10 product categories. For each product, we made sure that the hedonic product was on one list and the utilitarian one was on the other. Participants were randomly assigned to one of these two lists. For each product, participants were provided with a product description and then asked to imagine that they were buying that product. They received two product options and were asked to select one (binary response scale). For Option 1, user ratings were higher than the expert ratings (user ratings: 4.5 stars vs. expert ratings: 2.5 stars). For Option 2, user ratings were lower than the expert ratings (user ratings: 2.5 stars vs. expert ratings: 4.5 stars).

Results

For each of the 20 products, we used a single proportion chi-squared test to assess if participants preferred the option with higher user or expert ratings. We find a significant preference for the user recommended products for 18 of the 20 products. The two products that did not show a significant preference are the electric guitar and child's car seat. For the child car seat, consumers slightly preferred the option rated higher by experts (54%) to the one rated higher by users (46%). For the electric guitar, consumers slightly preferred the option rated higher by users (58%) to the one rated higher by experts (42%). However, neither of these proportions significantly differed from 50%. Finally, for each product category, we also conducted chi-squared tests to test if the preference for the user-preferred products was higher for the hedonic product, compared to the utilitarian one. We found no significant differences for any product category, suggesting that the preference for the user recommended product was not different for hedonic compared to utilitarian products.

TABLE 1: MESSAGE SOURCE PREFERENCE AND PRODUCT CODING RESULTS

Category	Product	Users	HED	Category	Product	Users	HED
Automotive	Sports Car	60%*	70%**	**Outdoor Recreational**	Tent	69%**	27%**
	Family Car	63%**	26%**		ATV Four Wheeler	60%*	54%
Books	Textbook	65%**	31%**	**Companion Pets**	Dog Chew Toy	76%**	50%
	Novel	65%**	74%**		Animal Crate	76%**	20%**
Film & Entertainment	Comedy	79%**	72%**	**Travel & Tourism**	Luggage	73%**	20%**
	Documentary	61%*	54%		High End Restaurant	77%**	73%**
Children's Products	Child Car Seat	46%	14%**	**Hobby & Recreational**	Electric Guitar	58%	60%
	Electric Car	65%**	34%*		Running Shoes	77%**	20%**
Household Items	Pool table	75%**	61%	**Household Electronics**	Washer & Dryer	60%*	15%**
	Garden Hose	72%**	12%**		Video Game Console	73%**	61%

*single proportion chi-squared results: * p < 0.05, ** p < 0.01*

Discussion

The results from Study 1 reveal that consumers have an overwhelming preference for user ratings. This preference was obtained for almost all products and all product categories. It did not differ as a function of product type (i.e., hedonic vs. utilitarian). We hypothesize that this pattern occurs because the majority of consumers feel more similar to a user than an expert, and, that consumers prioritize source similarity. The goal of the second study is to test this hypothesis and also elucidate the reason why source similarity is prioritized.

STUDY 2: DIAGNOSTICITY AS A MEDIATOR

Study 2 is designed to test our hypothesis that consumers prioritize source similarity over expertise because it is more diagnostic of it feels to use and experience the product. For this study, we use Karmarkar and Tormala's (2010) definition of source similarity which they define

as, how similar participants believed the message source was to themselves and how much participants felt they had in common with the message source. In essence, our hypothesis consists of two aspects. First, we propose that consumers prioritize ratings of similar sources. Second, we believe they do so because believe that source similarity is diagnostic of how it feels to use and experience a product. To test the first aspect, we explicitly tell participants to assume they are similar to users or to experts. We predict that participants will rely more on an expert rating, if they feel similar to an expert and on a user rating if they feel similar to a user. In addition to these two conditions, our design also includes a condition in which participants are not explicitly told that they are similar to one of the two sources. We expect that users will then prioritize user ratings, since their default inference will be one of similarity with users rather than experts.

We also test if consumers believe that source similarity is diagnostic of how it feels to use and experience a product. We predict that participants will view expert ratings as more diagnostic than user ratings, but only if they are explicitly told they are similar to experts. Lastly, we improve the realism of the product choice scenario. All ratings were 4.0 or higher, which are more likely to be observed in the real world than the 2.5 rating we used in Study 1. This difference is not inconsequential, since Study 1 may imply that participants had to choose between two poor options. In Study 2, they arguably have to choose between two good options.

Method

We recruited 176 adults (M_{age} = 35.6, 33.7% female) from MTurk to participate in a single factor (source similarity group: control, users and experts) study design. Participants were

presented with a hypothetical product purchase scenario for travel luggage and asked to indicate which product they would prefer from two options, on a 7-point Likert scale, 1 = definitely option 1 to 7 = definitely option 2. For Option 1, expert ratings were higher than the user ratings (expert ratings: 4.5 stars vs. user ratings: 4.0 stars). For Option 2, expert ratings were lower than the user ratings (expert ratings: 4.0 stars vs. user ratings: 4.5 stars). We also manipulated the perceived level of source similarity. Participants were told to assume that they had a lot in common with and were most similar to either experts or users or were not asked to assume anything (control condition). After participants indicated their product option preference, we then measured which rating type participants perceived to be the most diagnostic of product use and experience using four items. The items asked participants to indicate which rating type: 1. they believed reflects the experiences they will anticipate with the product, 2. reflects how it will feel to use this product, 3. is most likely to mention information most relevant to you, and 4. is most likely to mention information most important to you. Each item was measured on a 7-point Likert scale, 1 = definitely experts 1 to 7 = definitely users. We also conducted a source similarity manipulation check. For this question, participants were asked to indicate which rating source they had a lot in common with and felt most similar to, on a 7-point Likert scale, 1 = definitely experts 1 to 7 = definitely users.

Results

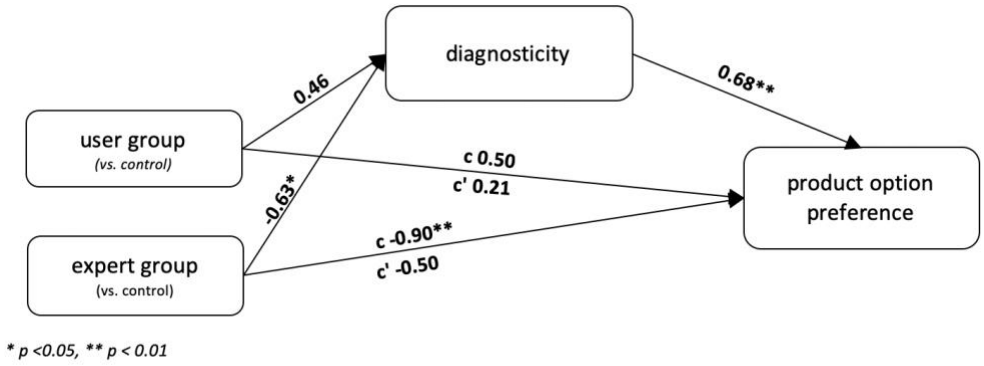
Product Rating Choice Preference. We conducted a one-way ANOVA using source similarity group as the independent variable and product choice as the dependent variable. As predicted, we find consumers are more likely to prefer the option rated highest by users (option

2) in the control and users condition than in the experts conditions($M_{control}$ = 4.31, SD = 1.72, M_{users} = 4.81 SD = 1.93, $M_{experts}$ = 3.40, SD = 1.75, $F(2, 173) = 9.2$, $p < .001$). Pairwise comparisons show a significant difference between the control and expert condition ($p = 0.01$), expert and user condition ($p < 0.001$), and a non-significant difference between the control and user condition ($p = 0.13$). In addition, the user and expert means differed significantly from the neutral midpoint of 4 (users = 4.81, $t(58) = 3.23$, $p = 0.002$, experts = 3.40, $t(58) = -2.60$, $p = 0.01$), while the control condition did not (control = 4.31 $t(57) = 1.38$, $p = 0.17$)

Mediation by diagnosticity. We first conducted a one-way ANOVA using source similarity group (i.e., control, users and experts) as the independent variable and diagnosticity as the dependent variable and find a significant main effect ($F(2, 173) = 9.19$, $p < .001$). We then test our hypothesis that diagnosticity mediates the effect of source similarity on product preference. Since the independent variable has three levels, we first dummy code our main categorical independent variable to create a contrast between the expert and the control condition and between the user and the control condition. We then create the mediator variable, by taking the average of the four diagnosticity items (Cronbach's $\alpha = 0.90$). The next step is to regress the product option preference on user and expert source similarity groups and find a significant main effect for the expert group ($\beta_{experts} = -0.90$, SE = 0.23, $p < 0.01$). However, there is not a significant main effect for the user group ($\beta_{users} = 0.50$, SE = 0.33, $p = 0.13$). When the mediator and source similarity manipulation check were entered into the regression, the effect of rating type was no longer significant ($\beta_{experts} = -0.48$, SE = 0.40, $p = 0.09$, $\beta_{users} = 0.22$, SE = 0.28, $p = 0.43$) and diagnosticity predicted product preference ($\beta_{diagnosticity} = 0.52$, SE = 0.11, $p < 0.001$), providing statistical evidence of successful full mediation. We then tested the overall significance of the indirect effect, by constructing a 95% confidence interval (CI) for the user

and expert conditions (bootstrap with 10,000 simulations). We find a significant indirect effect for the expert and user (both vs. control) conditions ($\beta_{experts}$ = -0.39, 95% CI: -0.75, -0.14, p = 0.03, β_{users} = 0.29, 95% CI: -0.04, 0.64, p = 0.09).

FIGURE 1: MEDIATION VIA RELATIVE DIAGNOSTICITY OF USER RATINGS



Discussion

Study 2 provides evidence to support our hypotheses. First, we show that source similarity plays a critical role in consumers' preference between products with conflicting ratings. In particular, when people feel similar to experts, they preferred the product rated highest by experts and when they feel similar to users, they prefer the product rated highest by users. We then provide evidence that consumers prefer source similarity because it is diagnostic of product experience. Finally, we do not find a significant difference between the user condition (where participants were explicitly told they are similar to users) and the control condition (without any similarity information); this suggests that, as a default, consumers view themselves similar to users. In the subsequent studies, we further test the role of source similarity and diagnosticity on consumers' product rating preference.

STUDY 3: TOTAL NUMBER OF RATERS AS A MODERATOR

In Study 2, we learned consumers prefer a message source they feel similar to, because similar sources are perceived to convey information diagnostic of product experiences. In Study 3, we introduce the number of raters as a factor that can affect perceptions of similarity and diagnosticity. We chose this factor for two reasons. First, the number of total raters is a salient characteristic that often accompanies product ratings. Second, group size has shown to exert a strong influence on consumers' perception and purchase behavior (Gerard et. al., 1968; Kampeier and Brown 2001; Milgram et al 1969; Ryu and Han 2009). Drawing from this research, we hypothesize that perceptions of similarity will increase as the total number of raters increases. If this is true, then by manipulating the number of raters, we will expect to see consumers' perceptions of similarity and diagnosticity shift to the rating type with the highest number of raters.

Method

We recruited 232 adults (M_{age} = 35, 51% female) from MTurk to participate in a single factor (user-to-expert total raters ratio: 1-to-10, 1-to-100, 10-to-1, 100-to-1) study design. Participants were presented with a hypothetical product purchase scenario for a TV and asked to indicate which product they would prefer from two options, on a 7-point Likert scale, 1 = definitely option 1 to 7 = definitely option 2. For Option 1, expert ratings were higher than the user ratings (expert ratings: 4.5 stars vs. user ratings: 4.0 stars). For Option 2, expert ratings were

lower than the user ratings (expert ratings: 4.0 stars vs. user ratings: 4.5 stars). We also manipulated the total amount of raters for the user and expert ratings, which was consistent for both product options. Each group received one of the four expert-to-user rater ratios: 1-to-10, 1-to-100, 10-to-1, 100-to-1. For example, in Group 1, the total number of expert raters for options 1 and 2 was 1, and the total number of user raters for options 1 and 2 was 10. After consumers indicated their product option preference, we then measured diagnosticity, using the same four items used in Study 2, on a 7-point Likert scale, 1 = definitely experts 1 to 7 = definitely users. In our last question, we measured perceptions of source similarity, by asking participants to indicate which rating source they had a lot in common with and felt most similar to, on a 7-point Likert scale, 1 = definitely experts 1 to 7 = definitely users.

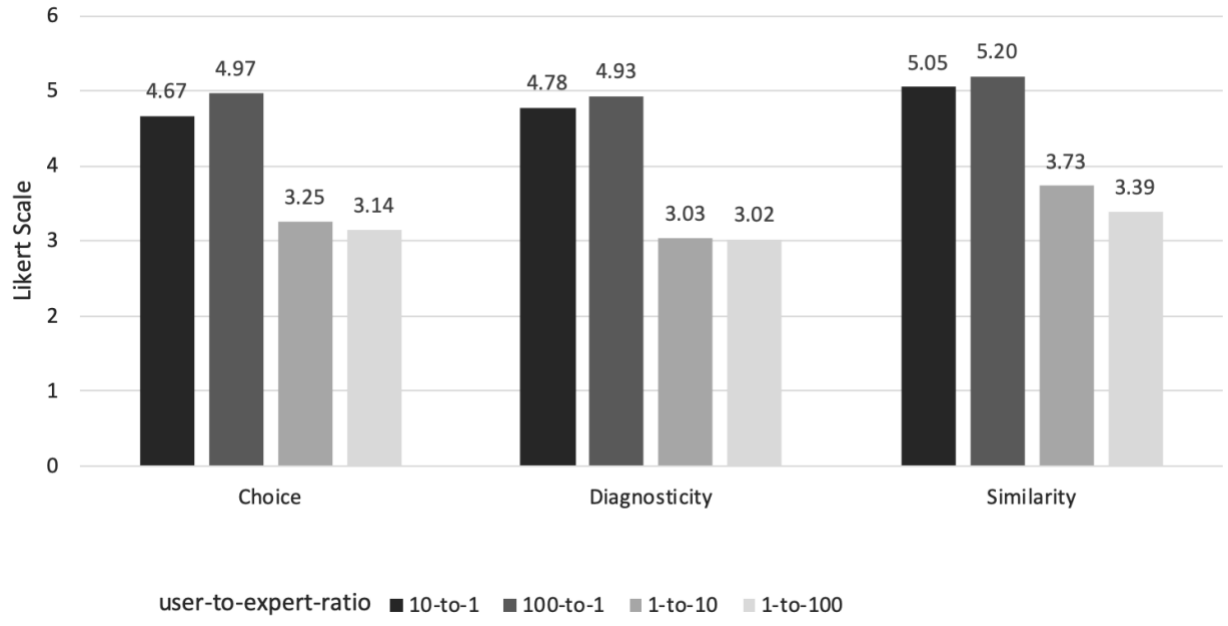
Results

First, we conduct three separate omnibus tests to see whether the four user-to-expert ratio groups predict perceptions of similarity, diagnosticity and product choice. For each of these tests, we conducted a one-way ANOVA using user-to-expert ratio as independent variable and source similarity, diagnosticity or product choice as the dependent variable. We observe a significant effect for all three independent variables: source similarity (F (3, 228) = 15.13, $p < 0.001$), diagnosticity (F (3, 228) = 52, $p < 0.001$) and product choice (F (3, 228) = 16.02, $p < 0.001$).

Next, we conduct pairwise comparison tests between the four user-to-expert ratio groups to further examine how total raters influences perceptions of similarity, diagnosticity and product choice. For all three (similarity, diagnosticity and product choice) pairwise tests, we find the rating type with the highest number of raters drives consumers' perceptions and choices between

the user and expert groups (10_users vs. 10_experts, $p < 0.001$, 10_users vs. 100_experts, $p < 0.001$, 100_users vs. 10_experts, $p < 0.001$, 100_users vs. 100_experts, $p < 0.001$). However, participants were insensitive to the size of the majority; they did not distinguish between a majority of 10 and a majority of a 100 (10_users vs. 100_users, $p > .50$, 10_experts vs. 100_experts, $p > .50$).

FIGURE 2: USER-TO-EXPERT RATIO MEASURES



Mediation via diagnosticity. Mediation analysis was conducted with user-to-expert ratio group as the predictor, diagnosticity as the mediator and source similarity as the manipulation check. We first dummy coded the categorical independent variable, user-to-expert ratio which created three variables. We then create our mediator variable, by taking the average of the four diagnosticity items (Cronbach's $\alpha = 0.89$). We then regress the product option preference on the dummy

coded independent variables and find a significant main effect. Next, we regress product option preference on the three user-to-expert ratio groups plus the mediator, (diagnosticity) and manipulation check (source similarity). We find the effect of the user-to-expert ratio weakens and that diagnosticity predicted product option preference providing statistical evidence of partial mediation. We then tested the overall significance of the indirect effect, by constructing a 95% confidence interval (CI) for the user-to-expert categorical independent variable (bootstrap with 10,000 simulations). Results indicate that two of the three dummy coded variables tested are significant and one is not.

TABLE 2: MEDIATION ANALYSIS VIA DIAGNOSTICITY

	Regression 1 *regress choice (DV) on user-to-expert ratio (IV)*		**Regression 2** *regress diagnosticity (M) on user-to-expert ratio (IV)*		**Mediation Results** *regress choice (DV) on user-to-expert ratio (IV) + diagnosticity (M) + source similarity*		*Bootstrapped Results*	
IVs *(user-to-expert ratio)*	*Coefficient*	*SE*	*Coefficient*	*SE*	*Coefficient*	*SE*	*Coefficient*	*95% CI*
intercept	*4.96***	*0.23*	*4.92***	*0.14*	*2.84***	*0.64*		
1-to-10	*-1.71***	*0.33*	*-1.89***	*0.20*	*-0.97**	*0.38*	*-1.50**	*-1.93, -1.11*
1-to-100	*-1.83***	*0.33*	*-1.90***	*0.20*	*-1.03**	*0.39*	*-1.48**	*-1.95, -1.02*
10-to-1	*-0.300*	*0.33*	*-0.150*	*0.20*	*-0.28*	*0.26*	*-0.09*	*-0.47, 0.31*
diagnosticity					*0.44***	*0.11*		
source similarity					*-0.02*	*0.07*		

*p *< 0.05, **0.001*

Discussion

Study 3 provides evidence to support our hypothesis that the number of raters affects perceptions of similarity, diagnosticity and product choice. We also see that this effect is more pronounced when the total number of raters differs between rating types (e.g., 10 users versus 1 expert), but not within the same rating type (e.g., 10 users versus 100 users). These results also

suggest a pronounced diminishing returns of additional raters. Adding more raters beyond 10 does not appear to produce an added persuasive effect when the comparison is a single conflicting rating of from another source type. We also replicate our mediation results from Study 2 and provide added evidence that diagnosticity mediates consumers rating type preference.

STUDY 4: ATTENUATING SOURCE SIMILARITY EFFECTS

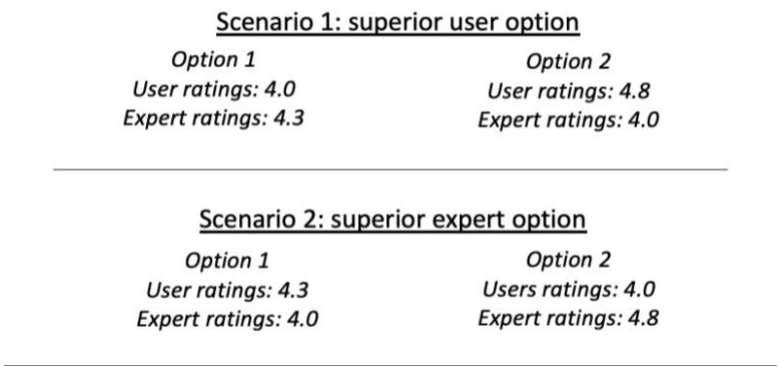
In Study 4, we demonstrate how to attenuate the effects of source similarity and in doing so, provide further process evidence that diagnosticity is the key driver behind a consumers' rating type preference. Prior research has shown that consumers emphasize specific product attributes during a product evaluation (Du, Hu and Damangir 2015). In this study we examine which rating type consumers prefer, while emphasizing experiential and non-experiential product attributes. We hypothesize that consumers prefer user ratings when prioritizing experiential information and expert ratings when prioritizing non-experiential information. In support of this hypothesis, research has shown that expert reviewers can be seen as a source of objective and presumably non-experiential information (De Langhe et. al., 2016; Henning-Thurau et al. 2001), whereas users can be seen as a source of experiential information (Clarkson et. al., 2013).

Method

We recruited 192 adults (M_{age} = 36, 40.6% female) from MTurk to participate in a between-subjects 2 (emphasized product attributes: experiential vs. non-experiential) x 2 (superior rated option: user recommended vs. expert recommended) study design. Study 4 is divided into three tasks. In the first task, we asked participants to rate four child car seat product attributes (ease-of-use, construction quality, ongoing maintenance, safety) as experiential or non-experiential. In this task, participants were provided with a definition of experiential information, which we define as *information that is best obtained after actual day-to-day use using the product (experiential), as opposed to a shorter-term interaction including inspection, testing or evaluation (non-experiential)*. Participants then scored the four attributes on the amount of experience that assessing them requires on a 5-point Likert scale, 1 = a lot of experience to 5 = not a lot of experience.

In the second task, participants were presented with a hypothetical product purchase scenario for a child's car seat and asked to make a selection from two options. Option 2 was always the option with the highest average ratings, but we varied whether the superior rating came from users or experts. The average ratings for option 2 was 4.4, compared to 4.2 (rounded) for option 1. Figure 3 provides details on the two product choice scenarios. If participants preferred the option with the highest average ratings, they should lean to option 2.

FIGURE 3: PRODUCT CHOICE SCENARIOS



We also asked participants to assume that they were making a choice while prioritizing experiential or non-experiential product information. In the experiential condition, participants were told: *"Imagine you have decided to buy a child's car seat and have narrowed your search to two options. You learn that both options have excellent automotive safety ratings and construction quality but you are unsure on their ease-of-use and maintenance. Which option would you prefer if you were making a choice only considering ease-of-use and maintenance?"* In the non-experiential information condition, they were told: *"Imagine you have decided to buy a child's car seat and have narrowed your search to two options. You learn both options have excellent ease-of-use and maintenance but you are unsure on their automotive safety ratings and construction. Which option would you prefer, if you were making a choice only considering automotive safety ratings and construction?"* Finally, participants were told to assume that price is equivalent for both options. Responses were measured on a 7-point Likert scale, 1 = definitely Option 1 to 7 = definitely Option 2. In the last task, participants were asked to indicate which rating type is more likely to reflect experiential information for the four

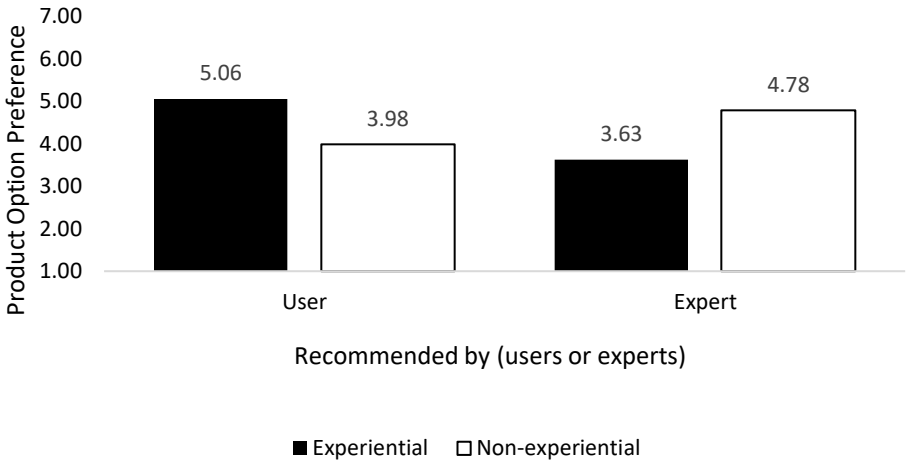
product attributes on a 5-point Likert scale, 1 = definitely user ratings to 5 = definitely expert ratings.

Results

Experiential Product Attribute Rating. Using a t-test, we compared the average scores on the four child car seat product attributes to the neutral midpoint (3). We found that two product attributes are considered experiential: ease-of-use and maintenance ($M_{ease\_of\_use}$ = 2.08, SD= 1.03, $t(191) = -12.33$, $p < 0.01$, $M_{maintenance}$ = 2.30, SD = 1.09, $t(191) = -8.84$, $p < 0.01$) and that the two other product attributes are considered non-experiential: safety and construction quality (M_{safety} = 3.74, SD = 1.51, $t(191) = 6.78$, $p < 0.01$, $M_{construction\_quality}$ = 3.41, SD = 1.30, $t(191) = 4.38$, $p < 0.01$).

Preference. We conducted a 2 (emphasized product attributes: experiential and non-experiential) x 2 (superior rated option: user recommended vs. expert recommended) between-subjects ANOVA on the preference for Option 2 (i.e. the overall highest rated option) which revealed a 2-way interaction (F (1,188) = 18.37, $p < 0.001$). When Option 2, the overall highest rated option, was recommended by users, participants preferred it more when they had to prioritize experiential attributes ($M_{\text{experiential}}$ = 5.06, SD = 1.54) than when they had to prioritize non-experiential attributes ($M_{\text{non\_experiential}}$ = 3.98, SD = 1.78, $F(1, 188) = 6.65$, $p < .001$). In contrast, when Option 2 was recommended by experts, participants preferred it more when they had to prioritize non-experiential attributes ($M_{\text{non\_experiential}}$ = 4.78, SD = 2.03) than when they had to prioritize experiential attributes ($M_{\text{experiential}}$ = 3.63, SD = 1.77), $F(1, 188) = 6.64$, $p < .001$).

FIGURE 4: PRODUCT OPTION PREFERENCE WHILE PRIORITIZING EXPERIENTIAL OR NON-EXPERIENTIAL ATTRIBUTES



More Likely-to-Mention Experiential or Non-Experiential Attributes. Lastly, using a t-test, we compared the average scores on the likely-to-mention attribute measure for the four child car seat product attributes to the neutral midpoint (3). We find that participants believe that users ratings are more likely to reflect experiential product attributes: ease-of-use and maintenance ($M_{ease\_of\_use}$ = 3.95, SD = 1.03, $t(191) = 11.87$, $p < 0.01$, $M_{maintenance}$ = 3.44, SD = 1.09, $t(191) = 6.01$, $p < 0.01$) and that expert ratings are more likely to reflect non-experiential product attributes: safety and construction quality (M_{safety} = 2.19, SD = 1.51, $t(191) = -10.79$, $p < 0.01$, $M_{construction\_quality}$ = 2.52 SD = 1.30, $t(191) = -6.45$, $p < 0.01$).

Discussion

Study 4 supports our hypothesis that consumers prioritize source similarity only if similar sources are likely to provide information on product attributes that they deem important. In particular, we show when experiential attributes are emphasized in a product selection, consumers prefer user ratings. When non-experiential attributes are prioritized, consumers tend to favor the opinion of experts. These results reinforce our theory that diagnosticity drives consumers' message source preference. Further, we show that the diagnosticity of a message source can be determined through both source similarity or the perceived expertise for certain product attributes.

GENERAL DISCUSSION

Consumers frequently consult multiple sources such as product ratings when making a product purchase. However, prior research has not examined which message source dominates and why. Our research helps to fill this gap and reveals some important findings. First, this work is the first to demonstrate across a wide range of product categories that consumers strongly prefer user to expert ratings. Second, we explain this behavior by showing that consumers generally prefer opinions from similar sources, because similar sources are perceived to convey information that is considered more diagnostic of everyday product *experiences*. We also show that perceptions of similarity can be increased by manipulating the number of total raters and that

the value of source similarity can be reduced when emphasizing non-experiential product attributes. Together, these findings produce several theoretical and managerial contributions.

Our research makes several contributions to the body of product ratings research. While some of that research focuses on the relationship between product ratings and product performance (Basuroy et. al., 2003; Chen et. al., 2011; Chen and Xie 2005; Duan et al 2008; Elberse 3003; Litman 1983; Liu 2006; Mahajan et al,1984; Moe and Trusov 2011; Reddy et. al., 1998; Reinstein et. al., 2005), our research adds to a smaller body of research on review helpfulness. Relevant prior research has explored the determinants of review helpfulness and found that the review length (Kim et. al., 2006) features (Mudambi and Schuff 2010) and valence (Bickart and Schindler 2012; Forman et. al., 2008; Ludwig et. al., 2013) impact review helpfulness. Our research is different from prior review helpfulness research in three ways. First, our research focuses on the rating, as opposed to the written review. Second, instead of exploring how the review's characteristics impact review helpfulness, we examine how the message source influences the helpfulness of ratings. Message source is a popularly studied topic in word-of-mouth research, (Brown and Reingen, 1987; Hovland and Weiss, 1951; Mcguire, 1969; Wilson and Sherrell, 1993) but it has yet to be investigated in the domain of product ratings. Third, our research identifies diagnosticity as the main reason for why consumers typically prefer user ratings over expert ratings.

Our findings also contribute to the field of persuasion research. Our work is the first to show that source similarity is strongly preferred over expertise. In fact, our findings challenge prior research which seems to have converged on the fact that expertise dominates other message source attributes. For instance, Woodside and Davenport (1974) found that consumers were more influenced by retail salesman who ranked higher expertise than source similarity. Wilson and

Sherrell's (1993) meta-analysis arrived at a similar conclusion: expertise has a stronger effect on persuasion than other message sources including source similarity, credibility, trustworthiness, and attractiveness. The difference in our findings could be due to two reasons. First, our work focused on online product ratings, whereas earlier studies tended to focus on in-person persuasion attempts. It is possible that expertise may still dominate in an in-person setting, but we do not find that to occur in an online setting. Second, perhaps the influence of experts has waned over time. One reason for this could be because user opinions are more voluminous and accessible than they have been in the past, which attenuates our reliance on expert ratings.

Our second contribution to persuasion research is to elucidate the reason why source similarity is persuasive. Prior work on persuasion and source similarity focused on the mechanism of the action of how source similarity is persuasive. For instance, drawing from the theoretical work of Petty and Cacioppo's (1986) Elaboration Likelihood Model, research has suggested that the persuasive effects of source similarity could be mediated through both the peripheral (Mackie et. al., 1990) and central route of processing (Hastie 1984; White and Carlston 1983). Instead of focusing on the mechanism of action, we focus on the *why* and show that source similarity is persuasive because similar sources are perceived to convey information diagnostic of the experience of using a product. In doing so, our research is the first to empirically link source similarity to diagnosticity.

While this work makes novel contributions, it also raises new questions, which could lead to new areas of future research. First, because we focused on the two most popular types of product ratings (i.e., experts and users) our work was restricted to studying two message source attributes (source similarity and expertise). Future research may want to investigate whether source similarity dominates other popularly studied message source attributes such as

attractiveness, credibility, and trustworthiness. Also, our findings show that most consumers strongly prefer source similarity over expertise. Some consumers, however, preferred expertise. This implies consumers may have a message source preference. If this is true, then a psychometric scale could be investigated to validate this assumption. It appears that existing and related message source persuasion scales focus only on source similarity (Beardon et. al; Park and Lessig 1997). To the best of our knowledge, no scale exists to determine which message sources consumers prefer from a larger variety.

This work also provides useful insights for managers. One straightforward way to apply this knowledge would be to simply emphasize user ratings for their products. Since our results show that most consumers prefer users to experts, this broad-based marketing approach could produce positive a positive effect. However, since we show consumers have message source preferences, our findings should warrant a more personalized advertising approach. This approach could include: (1) determining which message source their consumers prefer and (2) developing advertising campaigns from a message source that matches a consumer's preference. While we find that most consumers prefer users to experts, some consumers prefer expert ratings and managers will want to avoid ignoring this demographic through a one-size-fits all marketing campaign that advertises just through users. In addition, managers should also consider advertising product attributes through certain message sources. For instance, managers will want to emphasize expert opinions, when focusing on non-experiential attributes and user opinions for experiential attributes. Lastly, since we find that diagnosticity of product experience drives consumers message source preference, managers may also want to determine the types of product experiences their consumers care about. With this information, consumers can combine

it with the right message source to create personalized marketing campaigns designed to cater to individual consumers' preferences.

There are many sources of product information that compete for consumers' attention. As the number of sources and the volume of product information continue to grow, it will become increasingly important to discern which sources of information exert the strongest influence on consumers. The findings from this research serve as a reminder that consumers are attuned to the message source and that it will exert a strong influence on product perceptions and purchasing behavior. With this knowledge, the message source should be looked at more critically in practice and research.

CHAPTER 3: THE PERCEIVED UNIQUENESS ADVANTAGE OF SMALL COMPANIES: THE ROLE OF ASSUMPTIONS ABOUT MANUFACTURING

The personality of a company, like the personality of a human being, consists of many different dimensions or traits (Aaker 1997; Bolger 1959; Grohmann 2009 Heath et. al., 2011; Maehle et. al., 2011; Mizik and Jacobson 2008). These dimensions define the firm image, which has been shown to be both a strategic asset and a source of competitive advantage. While prior research has demonstrated that firm image affects consumer judgement and behavior, it appears that the majority of this work focused on how cause-related firm marketing efforts (e.g., philanthropy, sponsorships, corporate social responsibility, etc.) impact consumers (Brown and Dacin 1997). Recent studies, however, are beginning to reveal that more subtle firm factors also shape consumers' firm evaluations and product perceptions. One such factor, firm size, has been shown to influence product expectations and purchasing decisions (Chandy and Tellis 2000; Paharia et. al., 2011; Yang and Aggarwal 2019).

The present research adds to this nascent area of consumer research, by showing how firm size shapes consumers' assumptions and perceptions of the manufacturing process and, consequently, their purchasing behavior. Our first key finding, which is demonstrated across four studies and multiple products, shows that consumers prefer smaller firms for unique products and larger firms for non-unique products. We find that this preference results from two assumptions consumers entertain. First, consumers assume that smaller firms exhibit a higher degree of human intervention during the manufacturing process than larger firms. Second, consumers assume that human intervention results in some creative expression during the manufacturing process. The combination of these manufacturing assumptions leads consumers to think that

products from a smaller company are more likely to make them unique and that products from a large company are more likely to be non-unique.

This work adds to marketing research on firm size, which has grown in recent years and shown to be a significant factor in consumer behavior (Yang and Aggarwal 2019). Our focus is different from prior firm size research, however, which mostly focused on how consumers' personal beliefs inform firm size preference. For instance, prior research identified factors which motivate consumers to prefer a firm size, such as to support the 'little guy' or to express anti-global-conglomerate views (Paharia et. al., 2011; Thompson and Arsel 2004). In addition, Yang and Aggarwal (2019) find that consumers expect higher communion from small compared to large firms, which affects consumers' company evaluations. Instead of investigating of how beliefs and expectations motivate a firm size preference, we look at how the size of a firm informs consumers' beliefs about their products.

We also contribute to marketing research on the mode of production. This factor has garnered more attention in recent times, as automation has become more prevalent in the modern economy (Fuchs, Schreier and Van Osselaer 2016). However, despite the growing trend and popularity of automation, there is little research that helps us understand how the mode of production impacts consumers' judgements and perceptions (Leung, Paolacci and Puntoni 2018). Further, to the best of our knowledge, there is no research which connects firm size to consumers' manufacturing assumptions. Our research fills this gap, by revealing that consumers perceive a relationship between firm size and mode of production.

Lastly, we also contribute to research on product uniqueness. Prior work has explored the differences in consumers' need for uniqueness (Keinan and Kivetz 2011) and the factors that drive consumers' preference for unique products (Berger and Heath 2007; Simonson and Nowlis

2000; Tian, Bearden and Huner 2001). This research is largely devoid of work that explores how product uniqueness is linked to manufacturing methods. In one recent study, Reich et. al., 2018, showed that consumers perceive manufacturing defects to lead to a unique product, which then increases their perceptions of product value. In a similar vein, we show how consumers relate the mode of manufacturing (automation and handmade) to product uniqueness. In the following sections, we provide a theoretical background for our research, followed by the results from the studies designed to test our hypotheses. We then conclude the discussion, by outlining our limitations, areas of future potential research and managerial implications.

THEORECTICAL BACKGROUND

Information from both firms and consumers can shape the perceptions and judgements of consumers (Kuksov et. al., 2013). Consumers influence fellow consumers primarily through word of mouth, which has been shown to significantly affect consumers' perceptions and purchasing behavior (Godes and Mayzlin 2004; Lovett and Staelin 2016). Firms work to influence consumers through traditional promotional and advertising campaigns. These traditional methods can be characterized as intentional and explicit promotional efforts, but consumers can also be influenced by subtle firm factors that are not necessarily conveyed to consumers. In this paper, we focus on one such firm factor that has shown to have an influence on consumers, namely the size of the firm.

Firm size is probably one of the single most influential variables in business research (Alegre and Chiva 2008). It is well-established that firms of different sizes vary in many substantial aspects, including their patterns of practice and operating mechanisms which can

explain differences in various business performance measures (Christensen 1997; Yapp and Fairman 2006). For instance, compared to small firms, large firms tend to be more formalized and complex (Daft 1986, Kimberly 1976), are early adopters of innovation (Tomatzky et. al., 1990), introduce more innovative products (e.g., Sorescu, Chandy, and Prabhu 2003), reach consumers more quickly (Mitchell 1989), have greater export intensity (Chetty and Hamilton 1993) and provide better financial auditing quality (Francis and Yu 2009).

There is an abundance of research that examines how firm size relates to objective performance measures, but very little consumer research that has explored how firm size impacts consumers' judgments and decision making. This is surprising, especially in consideration of the fact that the Marketing Science Institute listed *'understanding the firm image and associations'* as a top research priority already back in 1992. In a recent study, Aggarwal and Jang (2019) show that firm size affects consumers' communion expectations, which influence their company evaluations. Relatedly, research has shown that large firms benefit from a reputation effect compared to small firms, which can cause consumers to perceive the purchase of the large firms' innovations as less risky (Chandy and Tellis 2000). In addition, consumers' support for small firms increases, when faced with a competitive threat from larger firms, due to consumers wanting to support the small businesses (Paharia et. al., 2011).

Adding to this stream of research, we hypothesize that firm size informs consumers' perception of the mode of production, which in turn, influences their purchasing behavior. In particular, we propose that consumers prefer small firms for unique products and large firms for non-unique products. This proposition is based on two more specific hypotheses. First, we propose that consumers associate a higher degree of human intervention in the manufacturing process with smaller firms than larger ones. Second, we propose that consumers infer from the

amount of human intervention in the production process the likelihood of a product being unique.

There are several reasons why small firms would have more human intervention and less automation. First, larger firms have more resources than smaller firms (Alegre and Chiva 2008), which presumably means larger firms can invest in the staff and equipment needed to set up automated processes. The second reason may be due to the favorable economic conditions resulting from automation. For instance, automation makes organizations more competitive in the market, by decreasing costs through the elimination of inefficiencies in the production process (Garza-Reyes et. al., 2012; Sohal and Egglestone 1994). Therefore, in order for larger firms to stay competitive, it may be necessary automating the manufacturing process. Smaller firms may desire the same operational efficiencies, but not have the resources or product demand to move to automation. Not surprisingly, then, research shows that smaller firms are less likely to adopt and use automated processes than larger firms (Raymond 1990; Swanson 1994; Yapp 1990). We propose that smaller firms are not only less likely to have automated process but also that consumers have a good intuition about this being the case.

We additionally propose that consumers will prefer some human intervention in the manufacturing process for a unique product. There are three reasons why this would be the case. First, consumers may believe that human intervention leads to products that all slightly deviate a bit from each other due to imprecisions associated to a production process made through human intervention. In fact, research has also shown handmade products tend to be more varied and natural (Abouab and Gomez 2015; Fuchs, et. al., 2015), whereas automation excels on consistency and precision (Liebl and Roy 2003; Markoff 2012). In addition, we assert deviations would still make a product unique even if they do not contain defects (Reich et. al., 2018).

Second, consumers may perceive handmade products to be more unique because they are closely connected to the creator. In fact, prior research has shown that consumers will desire handmade products because of the perception that handmade products have absorbed the creator's passion, essence, and that fact that artisans invest some of their selves in their craft and products. (Fuchs, et. al., 2015; Reich et. al., 2018). The third reason, apart from passion, is that a large amount of human intervention also allows for more creative expression, which also would render a product more unique. We define creative expression as *the extent to which the creator of the product transfers their unique preferences and tastes into the product during the creation process.* In fact, we propose that the preference for firm size will be mediated by human intervention, but subsequently goes through creative expression. That implies that, at least for the products we investigate, defects and passion, are not viewed as contributors to product uniqueness.

In sum, we propose firm size is an important factor for consumers when purchasing unique and non-unique products. It is important, because consumers make an association between firm size and mode of production: small firms have a high degree of human intervention, while large firms use more automation. This relationship also suggests that consumers prefer unique products to be handmade and non-unique products to be made through automation. Together, this leads consumers to prefer a small firm for a unique product and large firm for a non-unique product. However, when the mode of manufacturing is manipulated, firm size becomes less relevant and consumers will instead prefer the firm that provides their desired manufacturing approach.

In Study 1, we test the main effect and demonstrate that consumers prefer small firms for unique products and large firms for non-unique products. We explain this effect in Study 2, by

showing that consumers' perceptions of human intervention drive firm size preferences for a given level of product uniqueness. Then in Study 3, we use the perception of human intervention as a moderator and show that we can manipulate consumers firm size preference, by changing the perceived level of human intervention. In our last study, we establish evidence for the hypothesized serial mediation. In particular, we show that consumers prefer small firms for a unique product because small firms have a higher degree of human intervention, which leads to an assumption of creative expression in the manufacturing process.

STUDY 1: FIRM SIZE PREFERENCE FOR UNIQUE AND NON-UNIQUE PRODUCTS

Study 1 is designed as an initial test of our hypothesis that consumers prefer products from a smaller firm if they want to obtain a more unique product. In the present study, we define product uniqueness as different from other products of the same type (Reich, Kupor and Smith 2018), but do not mean to define it as a one-of-a-kind product.

Method

We recruited 101 adults (M_{age} = 37, SD = 6.31, 47.1% female) from MTurk to participate in a single factor (product uniqueness: low and high) between-subjects study design. We randomly assigned participants to one of the conditions.

Both groups of participants were asked to imagine that they were buying a pizza and were given two options to choose from. In the low uniqueness condition, participants were told to make a selection assuming that they wanted a pizza that is mostly identical, with little to no

variation compared to other similar type pizzas. Participants in the high uniqueness condition were asked to make a selection assuming they wanted a pizza that is not identical and has some variation compared to other similar type pizzas. Both groups of participants were provided two options to choose from: a small pizza shop with one restaurant in town or a large pizza company with one location in town and many others across the country. Participants were also told to assume that wait time, price and freshness of ingredients were the same for both options. Responses were collected on a 7-point Likert scale, 1 = definitely the small firm to 7 = definitely the large firm.

Results and Discussion

We conducted a one-way ANOVA, with product uniqueness serving as the independent variable and firm size preference as the dependent variable. As predicted, we find that consumers prefer a small firm for a unique product and large firm for a non-unique product. (M_{unique} = 2.04, SD = 1.47, $M_{\text{non\_unique}}$ = 5.00, SD = 2.08, $F(1, 99) = 68.49$, $p < .001$, $d = 1.64$) The average response for firm size preference significantly differed from the neutral mid-point (i.e. 4) for each product, $M_{unique} = 2.04$, $SD = 1.47$, $df = 50$, $p < 0.01$, $M_{non\_unique} = 5.00$, $SD = 2.08$, $df = 49$, $p < 0.01$.

Study 1 provides initial evidence supporting the hypothesis that consumers prefer a small firm for a unique product and large firm for a non-unique product. In the next study, we explain this finding, by showing that preferences for product from large vs. small firms are driven by consumers' perceptions of the amount of human intervention.

STUDY 2: PERCEPTION OF HUMAN INTERVENTION AS A MEDIATOR

Study 2 is designed to explain the preference observed in Study 1. In particular, we theorize that consumers will prefer a small firm for a unique product and large firm for a non-unique product, because consumers assume small firms to have a higher degree of human intervention than large firms. Study 2 is similar in design to Study 1, except for two key differences. First, we introduce a mediator, which is consumers' perception of the degree of human intervention. Second, we test a new product, a kitchen table, to add generalizability to our findings from Study 1.

Method

We recruited 114 adults (M_{age} = 36, SD = 5.72, 40% female) from MTurk to participate in a 2 (product uniqueness – between) by 2 (size – within) mixed study design. We randomly assigned participants to one of the conditions.

Participants were asked to imagine that they were buying a kitchen table. In the low uniqueness condition, participants were told to make a selection assuming that they wanted a kitchen table that is not very unique and mostly identical to other similar type kitchen tables. Participants in the high uniqueness condition were asked to make a selection assuming they wanted a kitchen table that they felt was unique and not exactly identical to other similar type kitchen tables.

Participants indicated the extent they would prefer a kitchen table from a small firm in one item and a large firm in a second item. Both items were captured on a 7-point Likert scale, 1

= not at all to 7 = to a very great extent. Participants subsequently indicated to what extent they believed a small firm has a high degree of human intervention in one item, and a high degree of human intervention for a large firm in a second item. Responses were captured on a 7-point Likert scale, 1 = not at all to 7 = to a very great extent.

Results

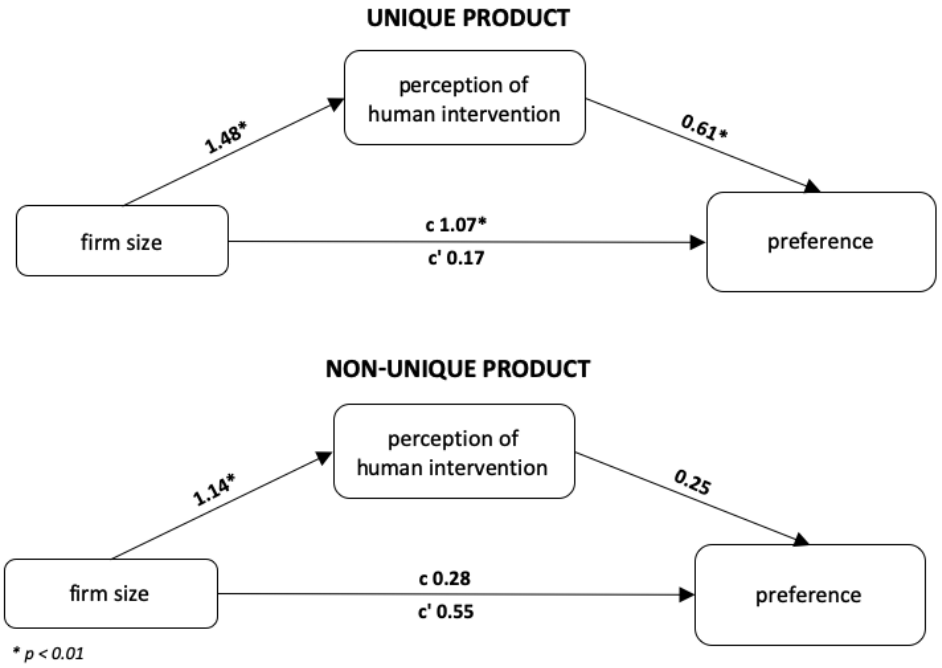
We predicted that participants would prefer a small firm for a unique product and a large firm for the non-unique product. To test this, we conducted a two-way mixed ANOVA with firm size as the within subject factor, and product uniqueness as the between-subject factor, which yielded a significant interaction, (F (1, 112) = 11.33, $p < 0.001$). Simple effects also partially replicated findings from Study 1, by showing that consumers preferred a small firm for a unique product (M_{small_firm} = 4.27, SD = 1.23, M_{large_firm} = 3.20, SD = 1.44, F (1, 55) = 12.2, $p < 0.021$ d = 0.80). However, results for the non-unique product were not significant, (M_{small_firm} = 3.62, SD = 1.20, M_{large_firm} = 3.90, SD = 1.37, F(1, 57) = 1.14, p = 0.29, d = 0.21).

Firm Size and Perception of Human Intervention

We then tested whether there is a difference in the perception of human intervention between a large and small firm. We used a one-way repeated-measures ANOVA using firm size as the independent variable and perception of human intervention as the dependent variable. We find that consumers perceive small firms to have a higher degree of human intervention than large firms ($M_{human\_intervention\_small}$ = 4.62, SD = 1.18, $M_{human\_intervention\_large}$ = 3.14, SD = 1.24; (F (1, 113) = 56.39, $p < 0.001$). We did not find a significant interaction between human intervention and product uniqueness (F (1, 112) = 0.98, p = 0.33).

Finally, we tested our hypothesis that the degree of human intervention mediates the effect of firm size on preference, differently for unique and non-unique products. Since we cannot test moderated mediation for a mixed design (i.e., with a between-subjects and a within-subjects factor), we conduct two separate mediation tests: one for the unique product and one for the non-unique product. For each analysis, we entered preference as the dependent variable, firm size (i.e., small or large) as the independent variable, and perception of human intervention as the mediator. We conducted the within-subjects mediation analysis with a confidence level of 0.95 and 5,000 simulations via the JSMediation Package made available in R. We find a significant indirect effect for the unique product (β = 0.61, 95% *CI:* 0.46, 1.45, $p < 0.01$) but not for the non-unique product (β = 0.25, 95% *CI:* -0.69, 0.07, p = .124).

FIGURE 1: MEDIATION VIA PERCEPTION OF HUMAN INTERVENTION



Discussion

Study 2 advances our understanding of why consumers prefer small firms for unique products and large firms for non-unique products. First, we replicate the effect found in Study 1, by showing consumers prefer smaller firms for unique products. We then show that consumers perceive small firms to have a higher degree of human intervention than large firms. Lastly, we provide evidence of our hypothesis that the perception of human intervention mediates the effect of firm size on preference for the unique product but not the non-unique product. In the next study, we expand our understanding of the role of human intervention.

STUDY 3: HUMAN INTERVENTION AS A MODERATOR

In Study 3, we test the role of perceived amount of human intervention in the preference for small firms for unique products. We theorize that consumers prefer a small firm for unique products and a large firm for non-unique products because consumers assume smaller firms to have a higher degree of human intervention and larger firms to have a lower degree of human intervention. If this is true, then consumers should become more indifferent between a small and a large company, if the amount of human intervention in their production process is the same. In other words, if a large and a small firm both employ the same amount of human intervention, consumers should be less likely to prefer the small firm for a unique product (compared to a control condition in which they spontaneously would assume more human intervention in a small company). Conversely, if both a large and a small firm employ the same amount of human

intervention, consumers should be more likely to prefer the small firm for a non-unique product (again compared to a control condition).

Method

We recruited 359 adults (M_{age} = 37, SD = 4.87, 52.5% female) from MTurk to participate in a between-subjects 2 (product uniqueness: low and high) x 3 (human intervention: control, low and high) study design. We randomly assigned participants to one of the conditions.

All groups of participants were asked to imagine that they were buying a pizza and were given two options to choose from. The two product uniqueness conditions were presented in the same format as Study 1. We also manipulated the amount of perceived human intervention that was used during the creation of the pizza for both options. In the low human intervention condition, participants were told that there was very little human intervention used in the creation process, but instead it relied more on machine automation. In the high human intervention condition, participants were told that there was a lot of human intervention and that there was no machine automation in the creation process. There was no mention of any amount of human intervention for the control condition. Participants were provided with two options to choose from: a small pizza shop with one restaurant in town or a large pizza company with one location in town and many others across the country. Participants were also told to assume wait time, price and freshness of ingredients were the same for both options. We collected firm size preferences on a 7-point Likert scale, 1 = definitely the small firm to 7 = definitely the large firm.

Results

We conducted a two-way ANOVA using product uniqueness and human intervention as independent variables and firm size preference as the dependent variable and observed a significant main effect of product uniqueness (F (1, 354) = 51.75, $p < 0.01$) and a significant interaction, (F (2, 354) = 13.38 , $p < 0.01$). The main effect of human intervention was not significant, (F (2, 354) = 0.07, $p = 0.936$).

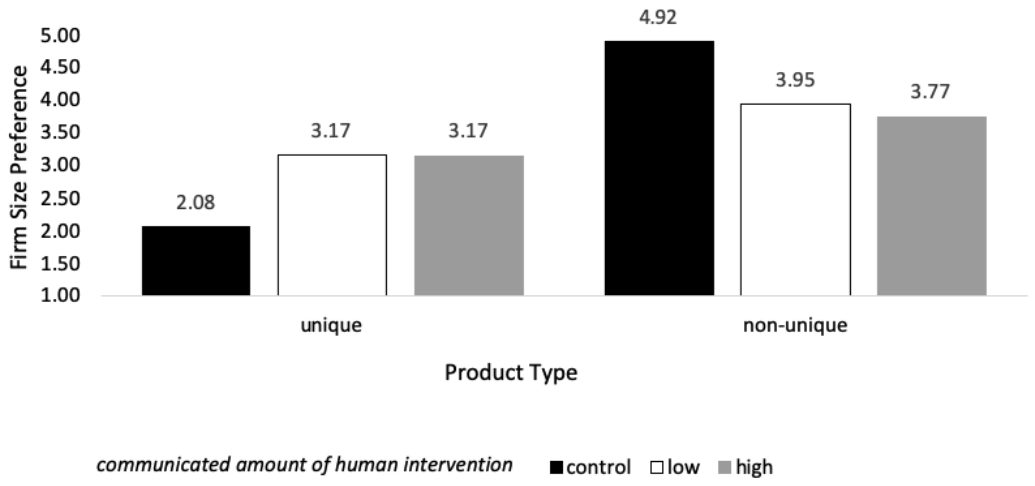
In the control condition, we replicate the main effect from Studies 1 and 2 and find that consumers prefer small firm for unique products and large for non-unique products, ($M_{unique\_control}$ = 2.08, SD = 1.52, $M_{non\_unique\_control}$ = 4.91, SD = 1.86; t(354) = 8.36, $p < 0.001$, d = 1.67). The firm size preference significantly differed from the neutral mid-point (i.e. 4) for both products, M_{unique} = 2.08, t = -9.98, df = 60, $p < 0.01$, M_{non_unique} = 4.91, t(354) = 3.78, df = 58, $p < 0.01$.

We find no difference in preferences between the high and the low human intervention condition, for either the unique product ($M_{unique\_high\_intervention}$ = 3.17, SD = 1.97, $M_{unique\_low\_intervention}$ = 3.17, SD = 1.81; t(354) = 0, $p = 1$, d = 0) or the non-unique product condition ($M_{non\_unique\_high\_intervention}$ = 3.77, SD = 1.83, $M_{non\_unique\_low\_intervention}$ = 3.95, SD = 2.11; t(354) = 0.51, p = 0.60, d = 0.1). We, therefore, combine the preferences in the two human intervention conditions and compare them to the preferences in the control condition, for the unique product and the non-unique product separately.

For unique products, consumers shift their preferences to larger firms, when human intervention for both firms is either low or high ($M_{unique\_control}$ = 2.08, SD = 1.52, $M_{unique\_low\_intervention}$ = 3.17, SD = 1.81, $M_{unique\_high\_intervention}$ = 3.17, SD = 1.97; t(354) = 3.72, $p <$ 0.001). In the non-unique product condition, consumers shift their preferences away from a large

to a small firm, when both firms are characterized either by high or low degrees of human intervention, ($M_{non\text{-}unique\_control}$ = 4.92, SD = 1.83, $M_{non\_unique\_low\_intervention}$ = 3.95, SD = 2.11, $M_{non\_unique\_high\_intervention}$ = 3.77, SD = 1.83; $t(354) = -3.57$, $p < 0.001$).

FIGURE 2: FIRM SIZE PREFERENCE FOR UNIQUE AND NON-UNIQUE PRODUCTS AS A FUNCTION OF HUMAN INTERVENTION



Discussion

Study 3 replicates the main effect found in Studies 1 and 2 and shows that consumers prefer a small firm for a unique product and a large firm for a non-unique product. We also provide evidence to support our hypothesis that assumptions about differences in amount of human intervention underlie these preferences. When both firms are said to have the same level of human intervention, be it low or high, the assumption of differential human intervention no

longer applies. As a result, both for unique products and non-unique products, participants' preferences shifted to being indifferent between smaller and larger firms. Therefore, compared to the control condition, preferences shifted to a larger firm for unique products and to a smaller firm for non-unique products. In our final study, we further investigate the underlying reason why human intervention is important to consumers, when considering a unique product.

STUDY 4: SERIAL MEDIATION VIA CREATIVE EXPRESSION

In Study 2, we learned that consumers preferred smaller to larger firms for unique products because they assumed smaller firms to have a higher degree of human intervention than larger firms. The current study builds off of this finding and is designed to further understand the reason why human intervention, is an important factor for unique products. We theorize that human intervention is preferred for unique products because consumers perceive human intervention to lead to creative expression during the manufacturing process. While Study 4 closely resembles the design of Study 2, it differs in two important ways. First, we drop the non-unique product since the mediation results for the non-unique product in Study 2 was not significant. Second, we test a new product to increase the generalizability of our findings.

Method

We recruited 59 adults (M_{age} = 37, SD = 5.01, 43% female) from MTurk to participate in a within-subjects study design. All participants answered the same set of questions in the same

Participants were asked to imagine that they were buying a leather coat and told to make a selection, assuming they wanted a coat which they felt was unique and not exactly identical to other similar type leather coats. Participants were then asked to indicate to what extent they would prefer this leather coat from a small firm in one item, and a large firm in a second item. Both items were captured on a 7-point Likert scale, 1 = not at all to 7 = to a very great extent.

We next asked participants to what extent they believed a small firm has a high degree of human intervention in one item, and large firm in a second item. Both items were measured on a 7-point Likert scale, 1 = not at all to 7 = to a very great extent.

Finally, we asked participants to what extent they believed that human intervention would result in creators of the product imbuing their own unique tastes and preferences into the product during the creation process at a small firm in one item, and a large firm in a second item. Both items were measured on a 7-point Likert scale, 1 = not at all to 7 = to a very great extent.

Results

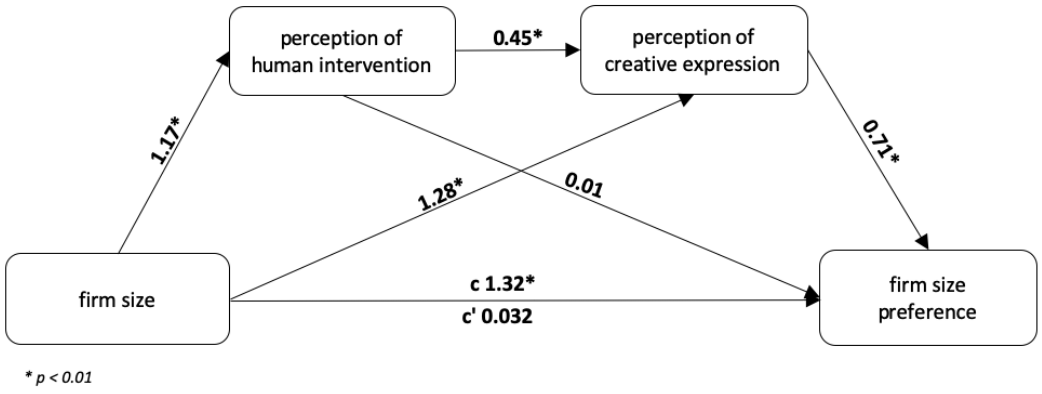
Consistent with previous findings, a one-way repeated measures ANOVA reveals that consumers prefer a small firm for a unique product. (M_{small_firm} = 4.25, SD = 1.34, M_{large_firm} = 2.93, SD = 1.36, (F (1, 58) = 4.89, $p < 0.01$, d = 0.98).

We also replicate the mediation effect of human intervention found in Study 2. We conducted a within-subjects mediation analysis using the MEMORE Package made available in SPSS, with firm size as independent variable, perception of degree of human intervention as the

mediator, and preference as dependent variable. Consistent with our previous findings, we find a significant indirect effect (β = 1.17, 95% CI: 0.55, 1.79, $p < 0.01$; 5,000 bootstrap samples).

In a final analysis, we tested our serial mediation model. Specifically, we tested if the path from perception of degree of human intervention (mediator 1) to preference is further mediated by the perceived degree of creative expression (mediator 2) Using the MEMORE Macro in SPSS, we find a significant indirect effect through the first (human intervention) and second mediator (creative expression) (β = .38, 95% CI: 0.79, 1.95, p < 0.01; 5,000 bootstrap samples), providing evidence of serial mediation.

FIGURE 3: SERIAL MEDIATION VIA PERCEPTION OF CREATIVE EXPRESSION



Discussion

First, Study 4 replicates our main effect found throughout this paper and reinforces the notion that consumers prefer a small firm for unique products. We also replicate the mediation pathway in Study 2 and demonstrate that the amount of human intervention explains consumers

firm size preference for a unique product. Lastly, we obtain process evidence of serial mediation and confirm our hypothesis that consumers' firm size preferences are driven by two sequential factors: the amount of human intervention and the creative expression that results from it.

GENERAL DISCUSSION

Although firm associations have a long history in marketing literature, there is a surprising lack of evidence on how, when and what types of associations affect consumers' responses (Dacin and Brown 1997). Our work adds to this area of research, by showing that firm size has a strong influence on consumers' product manufacturing process assumptions. Importantly, we show how these assumptions impact purchasing decisions for unique and non-unique products. To the best of our knowledge, this is the first research to connect firm size to the mode of production and product uniqueness. In doing so, we provide several theoretical contributions to multiple lines of research.

First, this work makes several contributions to research focused on firm size. While prior research has demonstrated that large firms tend to use automated processes more than small firms (Raymond 1990; Swanson 1994; Yapp 1990), it was unknown whether consumers' have the same perceptions; we demonstrate consumers do perceive small and large firms to have different manufacturing approaches. It was also unknown whether these assumptions would impact purchase decisions, but we find that consumers prefer small firms for unique products because small firms are perceived to have a higher degree of human intervention compared to a large firm. Lastly, our research provides more evidence to reinforce the notion that a consumers' firm size preference is not only a function of their internal personal beliefs (Ames and Iyen 2005), but also by how the firm size affects their perceptions.

Our findings also contribute to research focused on the benefits of different modes of production. For instance, prior research has shown consumers assign greater value to products that are handmade compared to products made though automation (Kruger et al., 2004; Fuchs). In addition, consumers may assign greater significance to a product that is handmade (Gray 2012; Hawley-Dolan and Winner 2011) and they are likely to pay more and purchase handmade products as gifts (Fuchs, Schreier and Van Osselaer 2016). Prior research on automation focused more on advantages to the firm compared to consumers, by showing how it can improve objective performance measures such as costs and processing capabilities (Heim and Peng, 2010; Kelley, 1994). Our contribution to this research is to reveal how the mode of production informs perceptions of product uniqueness. In particular, we show that consumers prefer a unique product to be handmade and non-unique product to be made via automation. Further, we find a handmade approach is associated to creative expression and that creative expression advantages unique products.

Lastly, our findings contribute to the body of research on product uniqueness. There is extant research that has focused on how consumers' internal motivations drive consumers to pursue a unique product (Ames and Iyen 2005; Irmak, Vallen and Sen 2010; Lynn and Harris 1997, Nowlis and Simonson 2000). Instead of focusing on consumers' internal motivations, we focus on how the external factor, firm size, relates to product uniqueness. We show that consumers prefer a small firm for a unique product, because small firms are perceived to have more human intervention in manufacturing approach. Our findings ultimately show that the mode of production is an important factor when considering a unique product. In a similar study, Reich, Kupor and Smith (2018) show how mistakes made in the manufacturing process can lead to perceptions of uniqueness and desirability. Our research is different, however, since we focus

on traditional manufacturing methods (handmade and automation), as opposed to irregularities or mistakes.

The present work also raises many new questions. First, our work focused on unique products and the manufacturing characteristic conditions consumers prefer, when choosing a unique product. Further research may want to investigate the manufacturing characteristics that provide an advantage to non-unique products and the underlying reasons why automation would be preferred. Prior research in this field has focused on how automation affects productivity and service quality (Anderson, Fornell, and Rust 1997; Anderson and Mazvancheryl 2004; Rust and Dekimpe 2010), but appears to be silent on the reasons why consumers would prefer this type of manufacturing. Our work shows that consumers prefer a large firm for a non-unique product, presumably because a large firm excels in automation compared to a small firm. Future research may want to investigate the reasons why automation is perceived to be advantageous for certain products.

Future research may also want to better understand for which types of products or industries consumers would prefer a unique versus non-unique product. For instance, results from our studies revealed that consumers may prefer food and furniture products to be unique. These findings suggest that consumers may have a priori uniqueness preferences for a given product. To test for this, a scale could be developed to measure consumers' product uniqueness preference. For instance, Berger and Heath (2007) found that consumers are more likely to diverge from majorities in product domains that are seen as symbolic of identity, but a further development that allows predicting or measuring which domains are more identity-expressive and why would be of interest.

Lastly, future research could also explore other factors, aside from manufacturing methods, that can explain why consumers assume that a small firm would excel at producing unique products and a large firm for non-unique products. For example, perhaps the firm's operational structure or available resources could explain these differences. Small firms have shown to have fewer standardized processes and are less formalized and complex than large firms (Daft 1986, Kimberly 1976). Further, Schmenner (1982) showed that small firms tend not to have big bureaucratic structures that add many layers of management and have more of a bottom-up decision-making style, compared to large firms.

The findings from this research also provide useful managerial insights. First, we remind managers that subtle firm factors can have a strong impact on consumers perceptions and purchasing behavior. With this information, managers should be more attuned to their existence and the impact they can have on consumers. In addition, they may want to consider whether other firm factors besides firm size, impact consumers. Second, since we show that the mode of production is a key factor for why consumers prefer a small or large firm, we introduce a variable that managers can manipulate. The findings from our research shows that these manipulations will shift consumers' perceptions and purchasing decisions. This may be especially useful considering it is sometimes difficult to objectively categorize a product as handmade or machine-made (Barber 2013).

For instance, a manager at a large firm may want to deemphasize automation and highlight any human intervention manufacturing approach, if consumers prefer their products to be unique. Managers may also want to emphasize the creative expression used in the manufacturing process. For example, a fast-growing large furniture manufacturing company, Room and Board, advertises their furniture products are created by local artisans and small

family-own businesses. Many of their advertising images depict a craftsman's hands physically touching the products during the production process. One copy message even states: "*from accent tables to table lamps, our craftspeople are always up for a new challenge and a chance to apply their unique skills to a wide range of products."* Despite the emphasis of handmade and unique skill sets, one could easily assert that all products produced in one lot are mostly identical in nature. The findings from our work, however, would contend that consumers may have a different impression.

GENERAL DISCUSSION

Across eight studies, I add novel insights to reinforce the notion that the source of product information is an important factor that influences consumers. In the first paper, we answer a simple – but overlooked question: which source of information do consumers prefer and why? We find consumers generally prefer consumer originated sources over third parties. We then explain this behavior by showing consumers perceive consumer originated sources to be more diagnostic than a third party. In our second paper, we show how a subtle firm-dominated characteristic, firm size, influences manufacturing perceptions and purchase behavior. In particular, we find consumers will prefer a small firm for a unique products, because they assume small firms have a high degree of human intervention in the manufacturing process. Together, these findings offer several theoretical and managerial contributions.

I offer three theoretical contributions to research focused on the sources of information. First, I provide insight into which source of information consumers prefer and why. While prior research acknowledged the persuasiveness of advice largely depends on the source of information (Faraji-Rad, Samuelsen, and Warlop 2015), there is a dearth of research that has examined which source dominates. Further, our findings challenge prior consensus which suggested third parties dominate (Wilson and Sherrell's 1993; Woodside and Davenport 1974). Second, we explain why consumers prefer consumer originated sources. While Holvand (1953) theorized consumer originated sources are diagnostic to consumers, we are the first to produce empirical evidence to validate that theory. In addition, we are the first to show that consumer originated sources are generally more diagnostic than third party sources. Our third contribution is to reveal a linkage between firm size, consumers manufacturing assumptions and product

uniqueness. In doing so, we add novel findings to the nascent body of research (Yang and Aggarwal 2019) that is showing how subtle firm-dominated characteristics impact consumers.

This work also provides practical managerial implications. At a general level, I hope this dissertation raises the awareness to the importance of the message source. More specifically, that there are (a) different sources of product information, (b) they each impact consumers differently and (c) information is conveyed explicitly and implicitly. This is important, because all advertising campaigns will emphasize one or multiple sources of product information. Yet I question the deliberativeness of those choices. In fact, in my ten plus years in marketing and sales experience, I have never participated in a conversation focused on the source of information. Instead, it seems managers tend to take a one-size-fits all approach and try to use all of them.

At a tactical level, managers could simply take the topline results from the first paper and promote consumer originated sources. Since we find consumers generally prefer them, I anticipate this would yield positive effects. Further, managers may want to identify and emphasize the experiential product attributes consumers value. Lastly, managers will want to be attune the size of their firm and how it influences consumers' manufacturing assumptions. With this knowledge, managers can work to reinforce or redress those manufacturing assumptions in order to drive product adoption.

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